REMARKS

New claims 13-16 are added to claim the invention in alternative language. Independent claim 13 is understood to be patentable over the prior art because the combination of limitations are not thought to be shown or suggested. Specifically, claim 13 sets forth a PLD, and the PLD includes a programmable logic arrangement, configuration memory, a configuration control circuit, a boundary scan control circuit, a key memory, and a decryptor. The key memory is coupled to the boundary scan control circuit and is adapted to store at least one decryption key input via the scan port, transition to one of a secure mode and an non-secure mode in response to a control signal from the boundary scan control circuit, disable read and write of the key memory via the boundary scan control circuit in response to the key memory operating in a secure mode, and enable read and write of the key memory via the boundary scan control circuit in response to the key memory operating in an non-secure mode. The decryptor is coupled to the configuration control circuit and to the key memory. The decryptor is adapted to read the at least one decryption key from the key memory and decrypt an encrypted configuration bitstream from the configuration control circuit.

Claims 1-16 remain for consideration. All claims are thought to be allowable over the cited art.

The Office Action does not establish that claims 1 - 12 are unpatentable under 35 USC §103(a) over "Erickson" (U.S. patent number 5,970,142 to Erickson) in view of "Lee" (U.S. patent number 5,764,076 to Lee et al.). The rejection is respectfully traversed because the Office Action fails to show that all the limitations are suggested by the references, and fails to provide a proper motivation for modifying the teachings of Erickson with teachings of Lee.

The limitations of claim 1 are not shown to be taught by the Erickson-Lee combination. For example, the limitations include loading the decryption keys into the memory using the JTAG port, and the cited teachings of Lee do not suggest these limitations. The cited teachings of Lee describe JTAG circuitry in a PLD (col. 2, l. 38-46). The JTAG circuitry is used to verify the integrity of printed circuit board traces

between the PLD and other chips. There is no apparent suggestion of using the JTAG test circuitry for loading decryption keys as claimed. Therefore, the Office Action does not show that the Erickson-Lee combination teaches all the limitations of claim 1.

Furthermore, the alleged motivation for combining Lee with Erickson is improper. The alleged motivation states that "it would have been obvious ... to combine Lee's method of reprogramming configuration data to a PLD with Erickson's method of communicating configuration data to a PLD in order to avoid disconnecting or suspending authorized programmable logic devices from normal operations while loading or reprogramming the devices with a new decryption key." This alleged motivation is improper because it simply recites reasons for operational re-programmability of a device and does not provide evidence to suggest loading decryption keys via a JTAG port. Lee, in fact, never even mentions decryption, decryption keys, or any similar concept.

Claims 2-3 depend from claim 1 and are not shown to be unpatentable over the Erickson-Lee combination for at least the reasons set forth above. Claim 4 is an apparatus claim that includes limitation of a circuit for loading at least one decryption key through a test access port. Thus, claim 4 is also not shown to be unpatentable. Claim 5 depends from claim 4 and is not shown to be unpatentable for at least the reasons set forth above.

Claim 6 depends from claim 1 and includes limitations of configuring the PLD for a non-secure mode prior to the loading the decryption keys; and configuring the PLD for a secure mode after the loading the decryption keys. As explained above in regards to claim 1, the Erickson-Lee combination is not shown to teach loading of decryption keys using the JTAG port. Furthermore, the cited teachings of Lee teach use of an ISP-enable register to permit in-system programmability of function blocks. There is no apparent suggestion of loading decryption keys as claimed. Therefore, the Office Action fails to show that the Erickson-Lee combination teaches the limitations of claim 6.

The Office Action fails to show that the Erickson-Lee combination teaches the limitations of claim 7, which depends from claim 6. Claim 7 includes limitations of

erasing the decryption keys from the memory when configuring the PLD for the non-secure mode. The cited portion of Lee teaches that programmable memory cells in each of the functional blocks may be erased, and there is no apparent suggestion of erasing decryption keys when the PLD is configured for the non-secure mode. These limitations are seemingly ignored in the Office Action. Therefore, claim 7 is not shown to be unpatentable over the Erickson-Lee combination.

Claim 8 depends from claim 7 and is similarly not shown to be unpatentable over the Erickson-Lee combination.

Claim 9 depends from claim 1 and is not shown to be unpatentable for at least the reasons set forth above for claim 1.

Claims 10, 11, and 12 depend from claim 4 and are not shown to be unpatentable for at least the reasons set forth above for claim 4.

The rejection of claims 1-12 over the Erickson-Lee combination should be withdrawn because the Office Action fails to show all the limitations are suggested by the combination, and fails to provide a proper motivation for combining the references.

The Office Action does not establish that claims 1 - 12 are unpatentable under 35 USC §103(a) over "Kelem" (U.S. patent number 6,118,869 to Kelem et al.) in view Lee. The rejection is respectfully traversed because the Office Action fails to show that all the limitations are suggested by the references and fails to provide a proper motivation for modifying the teachings of Erickson with teachings of Lee.

Lee is not shown to teach or suggest the claim limitations as explained above in the traversal of the rejection over the Erickson-Lee combination. Furthermore, Kelem is not shown to teach or suggest the limitations of and related to the PLD operating in the secure and non-secure mode and the claimed use of the JTAG port for loading decryption keys. Further still, the cited portions of Kelem are not shown to suggest the loading of decryption keys and without use the use of a device programmer. Kelem does not appear to suggest how a key would be loaded. Therefore, the Kelem-Lee combination is not shown to teach all the limitations of the claims.

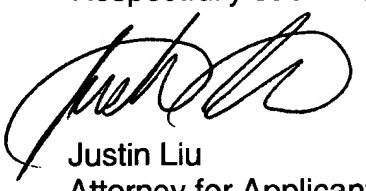
The alleged motivation for combining Lee with Kelem is improper. The alleged motivation is the same as that asserted for making the Erickson-Lee combination and is improper for the reasons set forth above.

The rejection of claims 1-12 over the Kelem-Lee combination should be withdrawn because the Office Action fails to show all the limitations are suggested by the combination and fails to provide a proper motivation for combining the references.

CONCLUSION

Reconsideration and a notice of allowance are respectfully requested in view of the Amendments and Remarks presented above. If the Examiner has any questions or concerns, a telephone call to the undersigned is invited.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patent, P.O. Box 1450, Alexandria, VA 22313-1450, on April 1, 2005.

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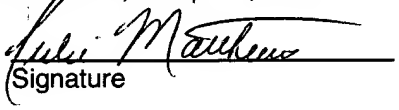

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